

2-2.13 Utility Facilities

General

All projects must conform to Caltrans' "Policy on High and Low Risk Underground Facilities Within Highway Rights of Way." See the Project Development Procedures Manual (PDPM). Deviations from the policy require a request to be submitted to the Chief of Division of Design for approval. A copy of the approval must be included with the PS&E submittal.

Existing utility facilities and proposed utility work must be shown on the project plans to alert the contractor to possible utility conflicts with the project work.

Subsurface facilities (including State-owned underground utilities and underground utilities owned by others) that are within the areas where project work is to be performed must be shown. Accuracy of the locations of State-owned underground utilities should not hinder disclosure of underground facility information. The location of these facilities are to be shown to the best degree of information available.

It is the responsibility of the project engineer to provide the right of way utility section with appropriate prints of geometric plans, profiles, and cross sections as required for the purpose of determining utility locations, possible conflicts, and for negotiating utility agreements. This information should be provided to the utility section when geometric approval is obtained. The utility section will provide the project engineer with any corrections and additions to the preliminary utility plan after review by the utility companies. This information shall be included in the final contract plans.

Where there is not sufficient space to allow utilities to be shown on the project plan layouts, separate utility plans should be developed and included in the project plan set.

For convenience, utilities and drainage facilities may be shown on the same sheets since both facilities are typically subsurface and their locations may be in conflict with each other.

Partial cross sections showing the relation of an existing utility to a proposed construction feature (drainage pipe, bridge footing, etc.) should be shown on the specific project plan, profile or detail sheet where such conflict could occur.

High risk and low risk subsurface facilities shall be shown on the plans as provided in the "Policy on High and Low Risk Underground Facilities Within Highway Rights of Way."

Reference points or data presented for the alignment and elevation of high risk subsurface facilities must correlate with the State's survey controls for the project.

Subsurface facilities may be potholed or positively located during the project development process.

When facility locations are presented on the plans, the horizontal position of the potholes shall be referenced by stationing and offset distances to an alignment line. Use of coordinate values to identify horizontal position of potholes is optional, but if shown, the appropriate datum year of the California Coordinate System and applicable Zone number must be included. See Section 4 of the PDPM, Appendix LL, "Policy on High and Low Risk Underground Facilities

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Within Highway Rights of Way," for requirements.

Where there is not sufficient space to allow facility location data to be shown adjacent to the facility, the location data should be identified by symbol and number (e.g. PH1, PH2, PH3, etc. enclosed within a square). When location data is identified by symbol and number, a table shall be added to the plan. The table shall be titled "Potholing Information" or "Utility Location Data" to present the corresponding horizontal and vertical position information.

Utility Plans

The base mapping for the project is typically used as the background (dropped out) for utility plans. Existing utilities are to be clearly and accurately depicted (including owner, type, size, pressure or voltage, etc.) on the project plans. Existing utilities and new and relocated utility facilities, if any, shall be shown using the Caltrans line styles shown on Standard Plan A10C. See Section 2.4 of the CADD Users Manual for further details.

The first sheet of the utility plans should contain notes, legends, symbols, and a list of abbreviations. Do not include standard plan abbreviations or acronyms as part of the listed abbreviations. The owners of the utilities must be identified by labeling each utility line. The full name of owner and the associated acronym identifying each owner may be shown in the notes. This owner acronym can then be used to label the remaining utility sheets.

Utilities to be relocated, removed or installed prior to construction should be labeled on the plans as "To be relocated (or removed or installed) by others." Where utilities are to be relocated by the project contractor, existing and final location of the utilities are to be shown on the project plans.

Where utility plans are included in the project plan set and no utility work is to be performed by the project contractor, the following note shall be included on each of these utility plan sheets: "THIS PLAN ACCURATE FOR UTILITY INFORMATION ONLY."

Utility Work As Part of Project Work

On those occasions when utility work is to be performed as contract work, details and quantity utility sheets may be required in addition to plan sheets. Utility work is typically performed by a subcontractor, therefore the work shown on these plans, details, and quantity sheets should only be related to utilities.

If work on existing facilities is to be performed as contract work, indicate what work is to be performed, such as "Remove," "Relocate," or "Abandon". The words "Construct," "Place," etc., should not be used to describe the installation of a new utility facility.

Clearly define utility work to be performed by the project contractor and that to be performed by others.

Utility plans, that show work to be done by the project contractor, should be prepared the same way drainage plans are prepared, except for the use of system numbers and item designations. See Section 2-2.10 of this manual.

Where new or relocated utility lines are to be installed as contract items, profiles along such lines may be needed. If needed, profiles may be shown on the bottom grid portion of a combination plan and profile sheet or on the utility detail sheets. Utility profiles should be prepared the same way drainage profiles are prepared, except for the use of system numbers and item designations. See Section 2-2.10 of this manual.

Where utility work is to be performed by the project's contractor, the following note shall be included on each of these utility plan sheets: "THIS PLAN ACCURATE FOR UTILITY WORK ONLY."

Utility Details

Drawings on the utility detail sheets are not drawn to a specific scale. Drawings are drawn at a one to one proportion, but then enlarged to fit within the border sheet. Each sheet is to be labeled "No Scale." Sufficient dimensioning shall be shown on the details so that the facilities are buildable and the quantities are calculable.

Standard drawings of other agencies, when applicable to the project, shall be included on the detail sheets. Referencing to a standard drawing number from another agency is not acceptable.

Do not add utility details or the utility quantity list to the utility plan (layout) sheet where such addition would produce sheets that are cluttered, unreadable, or confusing.

Utility Quantities

The summary of utility quantities should be prepared in a tabular format similar to the tables on the project summary of quantities.

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